



**STATE OF TENNESSEE
DEPARTMENT OF HEALTH
ENVIRONMENTAL LABORATORIES**

TDH: Lab Services JRL
Lab Services - Jackson Regional Lab
Jackson, TN 38301
731-426-0686

TDH: Lab Services KRL
Lab Services - Knoxville Regional Lab
Knoxville, TN 37920
865-549-5201

TDH: Lab Services NCL
Lab Services - Nashville Central Lab
Nashville, TN 37243
615-262-6300

Sent To: Geoff Klein
TDEC-DWS
200 East Race St
Knoxville, TN 37763

Lab ID: N00004054
Nashville Central Laboratory

Sampling Agency: TDEC: Division of Water Supply

Billing Code: 327.39-12

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.


Analytical Supervisor

Lab-Sample Number: N00004054001
Project Name:
Sample Description: KINGSTON WTP
Sampler Project Name: RAW
Project Site No.:
Station No.:
Date/Time Collected: 01/26/2009 09:20
Sampler's Name: GEOFF KLEIN
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 01/26/2009 12:40
Received By: L Barrociere

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

| TEST: Alkalinity, Total | | METHOD: EPA 310.2 | | | | |
|-------------------------|--------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Alkalinity | 55 | mg/L | 3.8 | 10 | S Burchfield | 1/27/2009 |

| TEST: Hardness, Calcium | | METHOD: SM 3500-Ca D | | | | |
|-------------------------|--------|----------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Calcium hardness | 48 | mg/L | 0.7 | 1 | P Leathers | 1/27/2009 |

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: N00004054002
Project Name:
Sample Description: KINGSTON WTP
Sampler Project Name: FINISH
Project Site No.:
Station No.:
Date/Time Collected: 01/26/2009 09:25
Sampler's Name: GEOFF KLEIN
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327-39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 01/26/2009 12:40
Received By: L Barrociere

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

| TEST: Alkalinity, Total | | METHOD: EPA 310.2 | | | | |
|-------------------------|--------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Alkalinity | 54 | mg/L | 3.8 | 10 | S Burchfield | 1/27/2009 |

| TEST: Hardness, Calcium | | METHOD: SM 3500-Ca D | | | | |
|-------------------------|--------|----------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Calcium hardness | 46 | mg/L | 0.7 | 1 | P Leathers | 1/27/2009 |

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: N00004054003
Project Name:
Sample Description: ROCKWOOD WTP
Sampler Project Name: RAW
Project Site No.:
Station No.:
Date/Time Collected: 01/26/2009 10:00
Sampler's Name: GEOFF KLEIN
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 01/26/2009 12:40
Received By: L Barrociere

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

| TEST: Alkalinity, Total | | METHOD: EPA 310.2 | | | | |
|-------------------------|--------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Alkalinity | 76 | mg/L | 3.8 | 10 | S Burchfield | 1/27/2009 |

| TEST: Hardness, Calcium | | METHOD: SM 3500-Ca D | | | | |
|-------------------------|--------|----------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Calcium hardness | 54 | mg/L | 0.7 | 1 | P Leathers | 1/27/2009 |

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: N00004054004
Project Name:
Sample Description: ROCKWOOD WTP
Sampler Project Name: FINISH
Project Site No.:
Station No.:
Date/Time Collected: 01/26/2009 10:05
Sampler's Name: GEOFF KLEIN
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 01/26/2009 12:40
Received By: L Barrociere

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

| TEST: Alkalinity, Total | | METHOD: EPA 310.2 | | | | |
|-------------------------|--------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Total Alkalinity | 65 | mg/L | 3.8 | 10 | S Burchfield | 1/27/2009 |

| TEST: Hardness, Calcium | | METHOD: SM 3500-Ca D | | | | |
|-------------------------|--------|----------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Calcium hardness | 53 | mg/L | 0.7 | 1 | P Leathers | 1/27/2009 |

J - Estimated value between MDL and MQL
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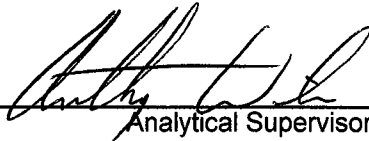
Sent To: Geoff Klein
TDEC-DWS
200 East Race St
Knoxville, TN 37763

Lab ID: N00004054
Nashville Central Laboratory

Sampling Agency: TDEC: Division of Water Supply

Billing Code: 327.39-12

This is to certify that the following results were determined using
good laboratory practices and in accordance with federal or state
approved methodologies.


Analytical Supervisor

Lab-Sample Number: N00004054001
Project Name:
Sample Description: KINGSTON WTP
Sampler Project Name: RAW
Project Site No.:
Station No.:
Date/Time Collected: 01/26/2009 09:20
Sampler's Name: GEOFF KLEIN
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 01/26/2009 12:40
Received By: L Barrociere

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 01/27/2009 | | | | A Wilson | 1/27/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Arsenic | U | µg/L | 0.93 | 5 | M Pattanayek | 1/27/2009 |
| Barium | 22 | µg/L | 2.5 | 5 | M Pattanayek | 1/27/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 1/27/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 1/27/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 1/27/2009 |
| Cobalt | 0.19J | µg/L | 0.04 | 1 | M Pattanayek | 1/27/2009 |
| Lead | 0.27J | µg/L | 0.10 | 1 | M Pattanayek | 1/27/2009 |
| Manganese | 27 | µg/L | 0.42 | 1 | M Pattanayek | 1/27/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 1/27/2009 |
| Thallium | 0.21J | µg/L | 0.03 | 1 | M Pattanayek | 1/27/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | M Pattanayek | 1/27/2009 |

| TEST: Mercury | | METHOD: EPA 245.1 | | | | |
|---------------|--------|-------------------|------|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Mercury | U | µg/L | 0.13 | 0.2 | A Wilson | 1/27/2009 |

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: N00004054002
Project Name:
Sample Description: KINGSTON WTP
Sampler Project Name: FINISH
Project Site No.:
Station No.:
Date/Time Collected: 01/26/2009 09:25
Sampler's Name: GEOFF KLEIN
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 01/26/2009 12:40
Received By: L Barrociere

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 01/27/2009 | | | | A Wilson | 1/27/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Arsenic | U | µg/L | 0.93 | 5 | M Pattanayek | 1/27/2009 |
| Barium | 20 | µg/L | 2.5 | 5 | M Pattanayek | 1/27/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 1/27/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 1/27/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 1/27/2009 |
| Cobalt | 0.09J | µg/L | 0.04 | 1 | M Pattanayek | 1/27/2009 |
| Lead | U | µg/L | 0.10 | 1 | M Pattanayek | 1/27/2009 |
| Manganese | 2.8 | µg/L | 0.42 | 1 | M Pattanayek | 1/27/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 1/27/2009 |
| Thallium | 0.13J | µg/L | 0.03 | 1 | M Pattanayek | 1/27/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | M Pattanayek | 1/27/2009 |

| TEST: Mercury | | METHOD: EPA 245.1 | | | | |
|---------------|--------|-------------------|------|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Mercury | U | µg/L | 0.13 | 0.2 | A Wilson | 1/27/2009 |

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: N00004054003
Project Name:
Sample Description: ROCKWOOD WTP
Sampler Project Name: RAW
Project Site No.:
Station No.:
Date/Time Collected: 01/26/2009 10:00
Sampler's Name: GEOFF KLEIN
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 01/26/2009 12:40
Received By: L Barrociere

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

| TEST: Digestion Metals | | METHOD: EPA 200.2 | | | | |
|------------------------|------------|-------------------|-----|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 01/27/2009 | | | | A Wilson | 1/27/2009 |

| TEST: ICP-MS | | METHOD: EPA 200.8 | | | | |
|--------------|--------|-------------------|------|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Arsenic | U | µg/L | 0.93 | 5 | M Pattanayek | 1/27/2009 |
| Barium | 27 | µg/L | 2.5 | 5 | M Pattanayek | 1/27/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 1/27/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 1/27/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 1/27/2009 |
| Cobalt | 0.10J | µg/L | 0.04 | 1 | M Pattanayek | 1/27/2009 |
| Lead | 0.14J | µg/L | 0.10 | 1 | M Pattanayek | 1/27/2009 |
| Manganese | 15 | µg/L | 0.42 | 1 | M Pattanayek | 1/27/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 1/27/2009 |
| Thallium | 0.11J | µg/L | 0.03 | 1 | M Pattanayek | 1/27/2009 |
| Vanadium | U | µg/L | 3.4 | 5 | M Pattanayek | 1/27/2009 |

| TEST: Mercury | | METHOD: EPA 245.1 | | | | |
|---------------|--------|-------------------|------|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Mercury | U | µg/L | 0.13 | 0.2 | A Wilson | 1/27/2009 |

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected

Lab-Sample Number: N00004054004
Project Name:
Sample Description: ROCKWOOD WTP
Sampler Project Name: FINISH
Project Site No.:
Station No.:
Date/Time Collected: 01/26/2009 10:05
Sampler's Name: GEOFF KLEIN
County: ROANE - 73
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-DWS
Billing Code: 327.39-12
Send Report To: TDEC-DWS
Agency Invoiced: TDEC-DWS
Priority Date:
Date/Time Received: 01/26/2009 12:40
Received By: L Barrociere

Field Determinations

pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

| TEST: Digestion Metals | | | METHOD: EPA 200.2 | | | |
|------------------------|------------|-------|-------------------|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Digestion Metals | 01/27/2009 | | | | A Wilson | 1/27/2009 |

| TEST: ICP-MS | | | METHOD: EPA 200.8 | | | |
|--------------|--------|-------|-------------------|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Arsenic | U | µg/L | 0.93 | 5 | M Pattanayek | 1/27/2009 |
| Barium | 25 | µg/L | 2.5 | 5 | M Pattanayek | 1/27/2009 |
| Beryllium | U | µg/L | 0.11 | 1 | M Pattanayek | 1/27/2009 |
| Cadmium | U | µg/L | 0.41 | 1 | M Pattanayek | 1/27/2009 |
| Chromium | U | µg/L | 2.0 | 5 | M Pattanayek | 1/27/2009 |
| Cobalt | 0.06J | µg/L | 0.04 | 1 | M Pattanayek | 1/27/2009 |
| Lead | U | µg/L | 0.10 | 1 | M Pattanayek | 1/27/2009 |
| Manganese | 2.5 | µg/L | 0.42 | 1 | M Pattanayek | 1/27/2009 |
| Selenium | U | µg/L | 1.3 | 5 | M Pattanayek | 1/27/2009 |
| Thallium | 0.08J | µg/L | 0.03 | 1 | M Pattanayek | 1/27/2009 |
| Vanadium | 3.6J | µg/L | 3.4 | 5 | M Pattanayek | 1/27/2009 |

| TEST: Mercury | | | METHOD: EPA 245.1 | | | |
|---------------|--------|-------|-------------------|-----|--------------|-----------|
| ANALYTE | RESULT | UNITS | MDL | MQL | ANALYZED BY: | DATE |
| Mercury | U | µg/L | 0.13 | 0.2 | A Wilson | 1/27/2009 |

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected